

The following Listing of Claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A surface roughening method, comprising:
moving a cutting tool having a cutting head along a longitudinal axis of an article, wherein the cutting head comprises a radial cutting blade having a first cutting edge and a second cutting edge; and
rotating the cutting head about the longitudinal axis of the article such that the first cutting edge of the cutting blade forms a first machined pattern of peaks and valleys on a surface of the article, and such that wherein the second cutting edge of the cutting blade removes at least a portion of the peaks in the first machined pattern to form uniform roughened fracture surfaces in a second machined pattern on the surface of the article, and
wherein the second machined pattern comprises an arrangement of grooves corresponding to the valleys in the first pattern and separated by lands corresponding to the uniform roughened fracture surfaces.
2. (Original) The method of claim 1, wherein
an entire cross section of each peak in the first pattern is fractured.
3. (Original) The method of claim 1, wherein
each of the grooves in the second machined pattern is symmetrical.
4. (Original) The method of claim 1, wherein
each of the grooves in the second machined pattern defines a v-shape.
5. (Original) The method of claim 1, wherein
a trailing edge of the cutting head roughens the surface of each land.

6. (Original) The method of claim 1, wherein the article defines a cylindrical body.
7. (Currently Amended) The method of claim 6, wherein the first cutting edge cuts an interior surface of the cylindrical body into the first machined pattern comprising a first substantially helical pattern defined by the alternating peaks and valleys, and wherein the second cutting edge creates the uniform roughened fracture surfaces on the interior surface by applying stress on the peaks to fracture at least a portion of the peaks to form the second machined pattern comprising a second substantially helical pattern defined by lands corresponding to the uniform roughened fracture surfaces, separated by grooves corresponding to the valleys.
8. (Original) The method of claim 1, wherein the article comprises a nonferrous metal.
9. (Original) The method of claim 1, further comprising applying a coating overlaying the first and second machined patterns on the surface of the article.
10. (Previously Presented) The method of claim 9, wherein the applying of the coating comprises at least one of chemical vapor deposition, plasma deposition, thermal spray coating, or fluid spray coating.
11. (Original) The method of claim 9, wherein the coating comprises an abrasion resistant material.
12. (Original) The method of claim 9, wherein the coating comprises at least one of a ceramic material or a ferrous metal.
13. (Original) The method of claim 12, wherein

the ceramic material comprises one or more of silicon nitride, silicon carbide, aluminum oxide, silicon dioxide, and titanium nitride.

14. (Original) The method of claim 12, wherein
the ferrous metal comprises one or more of titanium, tungsten, cobalt, nickel, iron,
and aluminum.

15-49. (Cancelled)